

Kinematic Equation Homework Due Monday October 6th

Name_____

Date_____

1. A car increases its speed from 24m/s to 46m/s over the course of 30 seconds. How much distance does it cover in that time?

GIVEN UNKNOWN EQUATION

2. What is the acceleration from #1? (Hint: You can use any equation which contains acceleration.

GIVEN UNKNOWN EQUATION

3. A plane begins its takeoff roll down a 185m runway. If the plane accelerates at 21m/s^2 what will be its takeoff speed? (Hint: Think about the two velocities as well as square roots)

GIVEN UNKNOWN EQUATION

4. A skateboarder begins to kick forward from rest and eventually reaches 18m/s after a constant acceleration of 6.4m/s^2 . How long did it take for the young punk to reach his top speed?

GIVEN UNKNOWN EQUATION

5. How far did the young man in #4 travel as he reached his top speed? (Hint: "How far" is measured in what units?)

GIVEN UNKNOWN EQUATION

6. A ruler is dropped between the fingers of one of your friends. She catches it in a startling 0.23 seconds. How far did the ruler fall?

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EQUATION